

Supporting Information

Stivers et al. 10.1073/pnas.0903616106

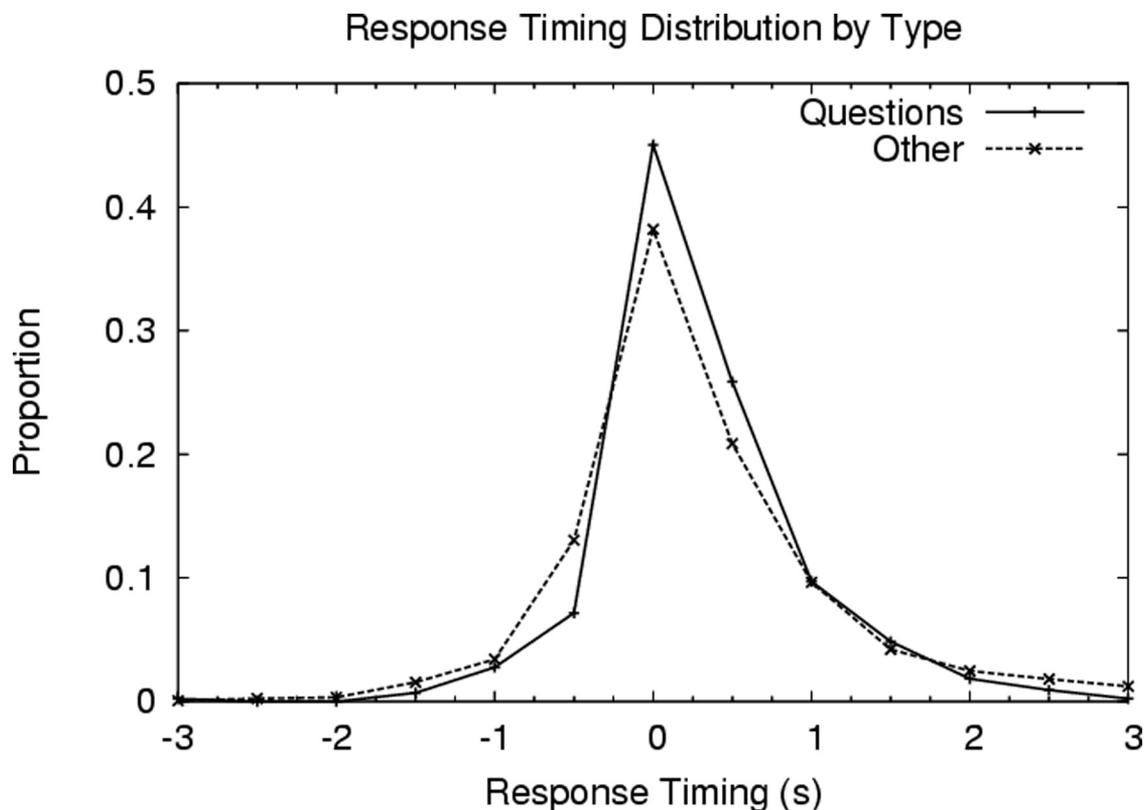


Fig. S1. Distribution of next turn offsets comparing question–response sequences with other sorts of turns in dyadic Dutch data. In a corpus of 1,521 turn transitions in continuous Dutch conversation we found no significant difference between the mean and variance of response times after questions and nonquestions [$t(1519) = -6.57, P = 0.51$].

Table S1. Overview of languages

Language	Language group	Data collector
ǀÁkhoe Hai om (Namibia)	Khoisan	Hoymann
Danish	Germanic	Heinemann
Dutch	Germanic	Englert
English (United States)	Germanic	Stivers
Italian	Romance	Rossano
Japanese	Isolate	Hayashi
Korean	Ural-Altaic	Yoon
Lao	Tai	Enfield
Tzeltal (Mexico)	Mayan	Brown
Yéí-Dnye (Papua New Guinea)	Isolate	Levinson

Table S2. Overview of coding categories

Element	Explanation	Examples from data
Yes–no questions	Utterances declaring speaker’s lack of knowledge and/or asking for an addressee’s provision of information—either confirmation or disconfirmation.	i. Are any of ‘em cute? ii. Are they hippies? iii. At thuh place on State Street? iv. Oh so they raised thuh deposit too?
Nonanswer response	A response that does not provide requested information but does deal with the request for information in some way.	i. I don’t know. ii. What? iii. (shrug) iv. Maybe.
Answer	Directly provides information/confirmation requested in the question.	i. (head nod) ii. No (head shake) iii. It <i>does</i> .
Visible component	If all or part of the response is kinesic.	i. Yeah (head nod) ii. (head shake) iii. (shrug)
Speaker gaze	Speaker gazes towards recipient during question and this can be seen by recipient.	(gaze to recipient)
Confirmation	Answer that agrees with the questioner’s underlying proposition. (e.g., “Did you go shopping” has an underlying proposition that “you went shopping”).	After an affirmative question e.g., Did you go shopping? i. Yeah. ii. (head nod) iii. I djd. iv. Uh huh
Disconfirmation	Answers that disagree with the questioner’s underlying proposition.	After an affirmative question i. No (head shake) ii. Not the whole morning no. iii. No I didn’t.
Information request	If the primary function of the utterance is to secure confirmation or disconfirmation (as a sort of information) even if utterance has another function as well.	i. Does she have to wear the little clogs and the white outfits? ii. Did he just tell you that right now? iii. Can you tell I’m looking at your mouth?
Noninformation requests	Utterances primarily performing other functions such as repairing understanding, challenging, or assessing someone/something.	i. You are? ii. Really? iii. That’s kind of a lot for breakfast don’t you think?

Table S3. Mean, median, mode and standard deviation by language

Language	Mean	Median	Mode	Standard Deviation
±Ákhoe Hai om	423.16	300	200	661.47
Danish	468.88	300	100	607.48
Dutch	108.93	100	100	476.45
English	236.07	0	0	519.81
Italian	309.94	200	100	542.54
Japanese	7.29	0	100	503.83
Korean	182.56	100	0	506.25
Lao	419.63	300	200	488.62
Tzeltal	67.13	0	0	452.26
Yéí-Dnye	71.26	0	0	371.19

Table S4. Overview of data by language

Language	Yes/no questions, <i>N</i>	Response given, %	Answer (vs. nonanswer) % of all responses	Confirm (vs. not), % of all answers	With visible (vs. not), % of all answers	With questioner gaze to recipient (vs. not), % of answers	Information request only, %
𐌆𐌀𐌿𐌹𐌸𐌺𐌰𐌹𐌸𐌰	95	80	76	75	21	21	42
Danish	196	87	75	71	37	75	30
Dutch	224	96	87	81	41	75	16
English	219	95	84	71	42	68	30
Italian	181	90	78	76	60	76	32
Japanese	247	89	67	81	54	88	30
Korean	195	90	64	70	34	71	21
Lao	163	73	82	77	27	63	30
Tzeltal	216	93	85	84	26	50	35
Yéli-Dnye	174	88	87	89	58	75	48

Table S5. Results of 2 sample *t* tests graphically represented in Figs. 3 and 4

Language	Difference between answer vs. nonanswer	Difference between confirm vs. disconfirm
ǀÁkhoe Hai om	267.75 ms, $t(93) = 1.71^*$	122.22 ms, $t(70) = .77$
Danish	433.33 ms, $t(194) = 4.54^{***}$	394.34 ms, $t(145) = 4.35^{***}$
Dutch	314.55 ms, $t(222) = 3.4^{***}$	127.74 ms, $t(193) = 1.52$
English	492.03 ms, $t(217) = 5.53^{***}$	323.37 ms, $t(181) = 4.85^{***}$
Italian	301.08 ms, $t(179) = 3.14^{***}$	304.25 ms, $t(140) = 2.97^{**}$
Japanese	264.7 ms, $t(245) = 3.99^{***}$	157.28 ms, $t(164) = 1.76^*$
Korean	147.54 ms, $t(193) = 1.96^*$	116.27 ms, $t(123) = 1.31$
Lao	240.38 ms, $t(161) = 2.44^{**}$	508.52 ms, $t(132) = 5.70^{***}$
Tzeltal	317.39 ms, $t(214) = 3.78^{***}$	193.08 ms, $t(182) = 2.34^{**}$
Yéli-Dnye	251.44 ms, $t(172) = 3.04^{**}$	220.48 ms, $t(150) = 3.23^{***}$

Difference in means, degrees of freedom, and *t* values are shown. *, $P \leq 0.05$; **, $P \leq 0.01$; ***, $P \leq 0.001$.

Table S6. Results of 2 sample *t* tests graphically represented in Figs. 5 and 6

Language	Difference between with visible vs. without	Difference between with speaker gaze vs. without
±Ákhoe Hai om	430.43, $t(75)=2.18^*$	119.91, $t(80)=0.62$
Danish	39.36, $t(191)=0.43$	-89.12, $t(194)=-0.89$
Dutch	291.28, $t(204)=4.57^{***}$	77.45, $t(222)=1.06$
English	281.88, $t(209)=3.97^{***}$	190.55, $t(217)=2.56^{**}$
Italian	133.4, $t(179)=1.63^*$	212.67, $t(179)=2.27^{**}$
Japanese	279.98, $t(243)=4.49^{***}$	90.35, $t(245)=0.92$
Korean	208.57, $t(186)=2.73^{**}$	157.23, $t(193)=1.98^*$
Lao	290.62, $t(142)=3.58^{***}$	193.92, $t(161)=2.49^{**}$
Tzeltal	33.7, $t(198)=0.42$	88.58, $t(214)=1.44$
Yéí-Dnye	63.54, $t(164)=1.07$	201.88, $t(172)=3.17^{***}$

Difference in means, degrees of freedom, and *t* values are shown. *, $P \leq 0.05$; **, $P \leq 0.01$; ***, $P \leq 0.001$.